

CAMAIR

THE LEADER IN DRY AIR TECHNOLOGY

INSTALLATION AND OPERATING INSTRUCTIONS

XL50-AD
Semi Automatic Dryer

Serial NO. 9601 and Above

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XL-AD SEMI AUTOMATIC DRYER

Congratulations on having purchased the finest compressed air drying system available. With routine and simple maintenance your CAMAIR dryer will give you years of trouble free service. With this dryer installed and operating, there is no further need for water traps or filters in your shop.

RECEIVING AND INSPECTION

All CAMAIR dryers are inspected and tested before shipment. Please inspect this dryer carefully for any damage that may occur in shipment. If there is any transit damage, please file a claim with the trucking company that delivered the unit and notify the company you purchased the dryer from.

LOCATING THE DRYER IN YOUR SHOP

The CAMAIR XL dryer must be located so that it is accessible for periodic maintenance. This area should be well lit, clean and ventilated. **The compressed air coming from your compressor into the dryer must be below 100 degrees F for the dryer to operate properly.** The ideal installation (Figure 1) would include an air cooled after cooler after your compressor and before your dryer. If you do not have an air cooled after cooler you should install the dryer after your receiver tank (Figure 2) and have a minimum of 50 feet of pipe between your receiver tank and the dryer.

FIGURE 1

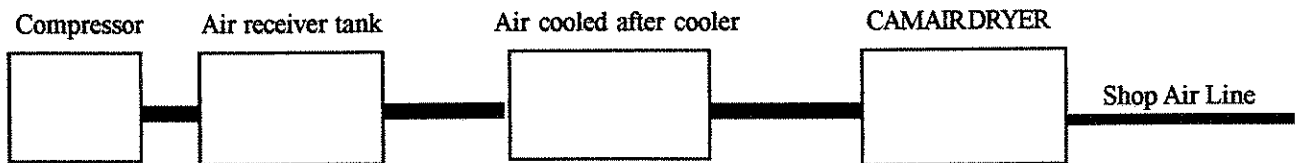
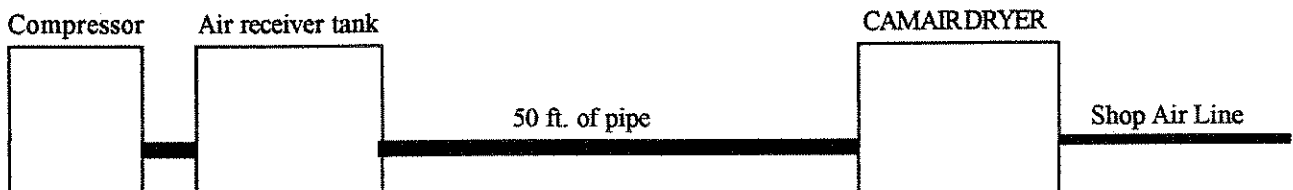


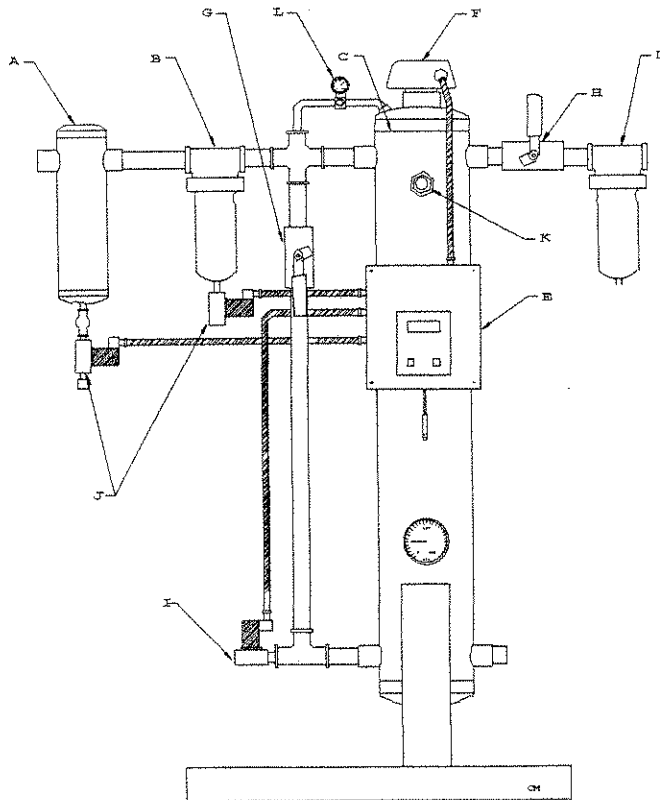
FIGURE 2



GETTING TO KNOW YOUR DRYER

Look over your dryer and become familiar with the various parts. This will help you understand the dryer operation better and will alert you to where general maintenance is required. Refer to the drawing below to identify the major parts of your dryer.

- A) WATER SEPARATOR - Removes 95 % of the liquid water from the compressed air.
- B) COALESCER - Removes oil mist to .1 micron. Coalescer element should be replaced every 6 months with P/N 080-010.
- C) DESICCANT DRYING TOWER - Contains CAMAIR desiccant. As the compressed air passes up through the desiccant bed, it is stripped of the moisture vapor giving you dew points as low as -40. The desiccant should be replaced every 3 to 5 years.
- D) FINAL FILTER - Removes any desiccant dust that may occur during the regeneration cycle. Element can be cleaned & reused. If element is fractured replace with P/N 080-015.
- E) CONTROL BOX - Contains the regeneration timer , automatic electronic drain controller and all the rest of the electronics needed to make your dryer work.
- F) REGENERATION HEATER - Provides heat to the desiccant during the regeneration cycle.
- G) REGENERATION SHUT OFF VALVE - Manual ball valve to be closed during the regeneration cycle.
- H) REGENERATION SHUT OFF VALVE - Manual ball valve stops the purge air from going downstream during regeneration.
- I) REGENERATION SOLENOID VALVE - Opens up during regeneration allowing purge air to escape.
- J) AUTOMATIC DRAINS - Periodically drains the collected water from the separator and coalescer.
- K) MOISTURE INDICATOR - Reads green when the desiccant bed is dry and turns white when the desiccant bed is wet.
- L) PURGE REGULATOR - Controls the amount of purge air going through the dryer during regeneration.



INSTALLING THE DRYER

-DANGER-

**ELECTRICAL HAZARD AND STORED ENERGY HAZARD
BEFORE WORKING ON DRYER, LOCK OUT AND TAG OUT COMPRESSED AIR AND
ELECTRIC SUPPLIES TO THE DRYER PER OSHA REGULATIONS. BE SURE TO RELEASE
COMPRESSED AIR FROM DRYER BEFORE WORKING ON IT.**

Remove the CAMAIR dryer from the shipping skid and set it in place. Shut your air compressor down, lock it out in accordance with OSHA regulations and relieve the air pressure from your compressed air system. Connect the inlet air to the "AIR IN" of the CAMAIR dryer. (We recommend that you install a bypass around the dryer for routine servicing) Next, connect the shop air line to the "AIR OUT" of the CAMAIR dryer. Plug the dryer into a standard 115 volt outlet and you are ready to go.

IMPORTANT: Be sure to check the polarity of the outlet you are using. Reverse polarity is a safety hazard. It may cause erratic operation of the drain valves, and may damage the regeneration heater.

DRYER OPERATION

The CAMAIR XL-AD dryer is semi- automatic and requires manual regeneration every other night. When you leave for the day, simply close both regeneration shut off valves, push the regeneration ON/OFF button, (The desiccant tank will depressurize out the regeneration solenoid valve) and go home. When you come in the next day, simply return the two ball valves back to there original positions.

IMPORTANT: You must leave your air compressor on during the regeneration cycle so the dryer has purge air. If you do not, your dryer will not regenerate and heater failure may occur.

MAINTAINING YOUR DRYER

There are several things you should do to insure trouble free operation of your XL dryer:

A) Check the operation of the automatic drains once a week to be sure they are draining properly. (Press the drain "TEST" button on the front of the control board. The drains should open up and blow out compressed air) If they are not working or are sticking open, disassemble and clean the non working valve. (See drain valve servicing sheet at the back of this manual.)

B) Check and clean the final filter element once a month. Replace element if it is fractured with P/N 080-015

C) Check the coalescer element once a month and change the element when either the outside of it is oil stained or every six months. Replace with P/N 080-010

TROUBLE SHOOTING YOUR DRYER

-DANGER-

ELECTRICAL HAZARD AND STORED ENERGY HAZARD.

BEFORE WORKING ON DRYER, LOCK OUT AND TAG OUT COMPRESSED AIR AND ELECTRIC SUPPLIES TO THE DRYER PER OSHA REGULATIONS. BE SURE TO RELEASE COMPRESSED AIR FROM THE DRYER BEFORE WORKING ON IT.

A) NO AIR PRESSURE AFTER DRYER

- 1) Air compressor shut off---- Turn on compressor
- 2) Inlet valve closed---- Open inlet valve
- 3) The regeneration shut off valves (Figures G or H) were not opened after regeneration---- Open valves

B) DIGITAL READOUT FLASHING 500'

This is a high temperature shutdown of the unit. **DO NOT ATTEMPT TO RESTART THE UNIT. CALL THE FACTORY FOR TROUBLE SHOOTING INSTRUCTIONS (800-943-7924)**

C) AIR PRESSURE COMING OUT OF REGENERATION SOLENOID VALVE

- 1) Regeneration exhaust valve (Figure I) has failed to close after regeneration---- Take the valve apart and clean it. (See drain valve servicing sheet on the next page of this manual.)

D) MOISTURE INDICATOR DOES NOT TURN GREEN

- 1) Moisture indicator is no good---- Replace indicator
- 2) Dryer has failed to regenerate properly---- You must leave your compressor on at night during the regeneration cycle or your dryer will fill up with water and turn the moisture indicator white.

E) EXCESSIVE PRESSURE DROP ACROSS DRYER

- 1) Coalescer element is saturated with oil---- Replace element.
- 2) Final filter is clogged---- Clean final filter or replace.

F) WATER IN AIR LINES AFTER DRYER

- 1) Compressor not on during the regeneration cycle ---- Leave compressor on.
- 2) Heater has failed---- Start the regeneration cycle. The regeneration light should come on and a steady stream of air should come out of the regeneration solenoid (Figure I). Wait 2 hours then look at the digital temperature readout. It should read between 130 to 300 degrees. If it does not, heater has failed---- Replace heater
- 3) Regeneration solenoid has failed to open during regeneration---- Push the regeneration button. The dryer should depressurize out of the regeneration solenoid valve. (Figure I) If air does not come out, the solenoid has failed---- Replace the solenoid coil.
- 4) Inlet air too hot (over 100 F)---- Move dryer further downstream or install after cooler.
- 5) Automatic drains not working---- Press the drain "TEST" button on the control board. The drains should open up and air should come out of both drain lines. If not, replace the drain coil.
- 6) Dryer is overloaded---- Take your compressor horse power and multiply it by 3.3. That number should not exceed the model # of your dryer. (EX: if you have a 30 HP compressor $\times 3.3 = 99$ CFM you must have a XL100 or larger.)

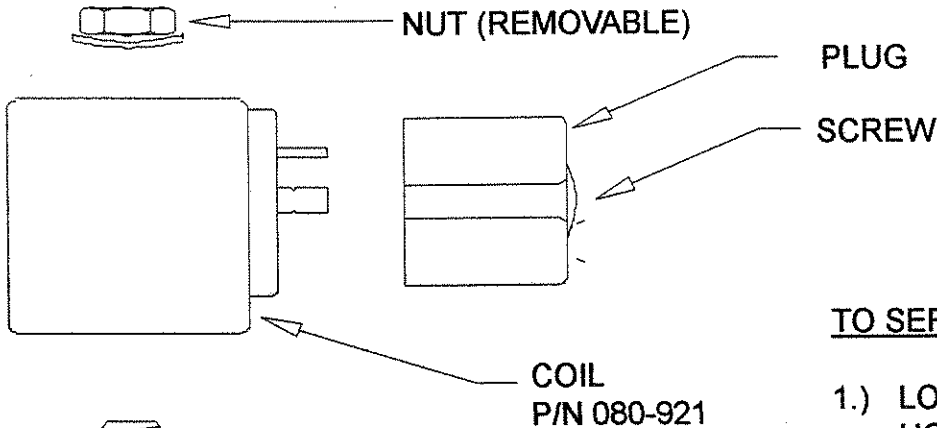
G) AUTOMATIC DRAINS LEAKING AIR

- 1) Disassemble and clean leaking valve.(See drain valve servicing sheet on the next page of this manual)

If you are unable to get your dryer back into operation by using this trouble shooting guide, or need further information about this dryer or any other product please call (800-943-7924)

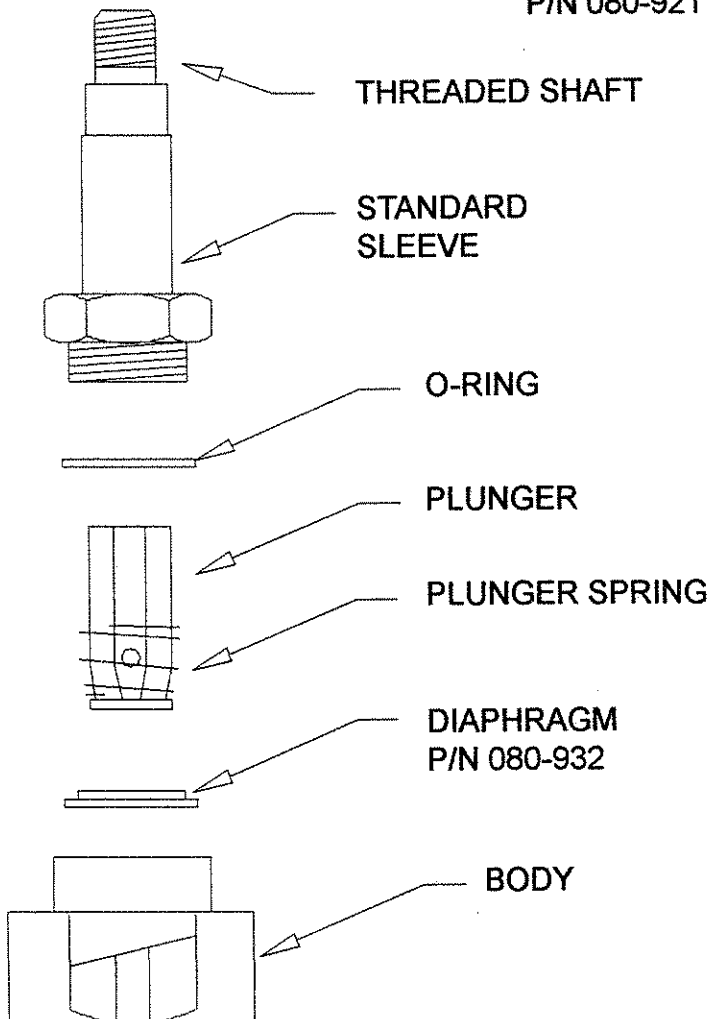
DRAIN VALVE SERVICING SHEET

CAMAIR XL DRYERS DRAIN VALVE SERVICING

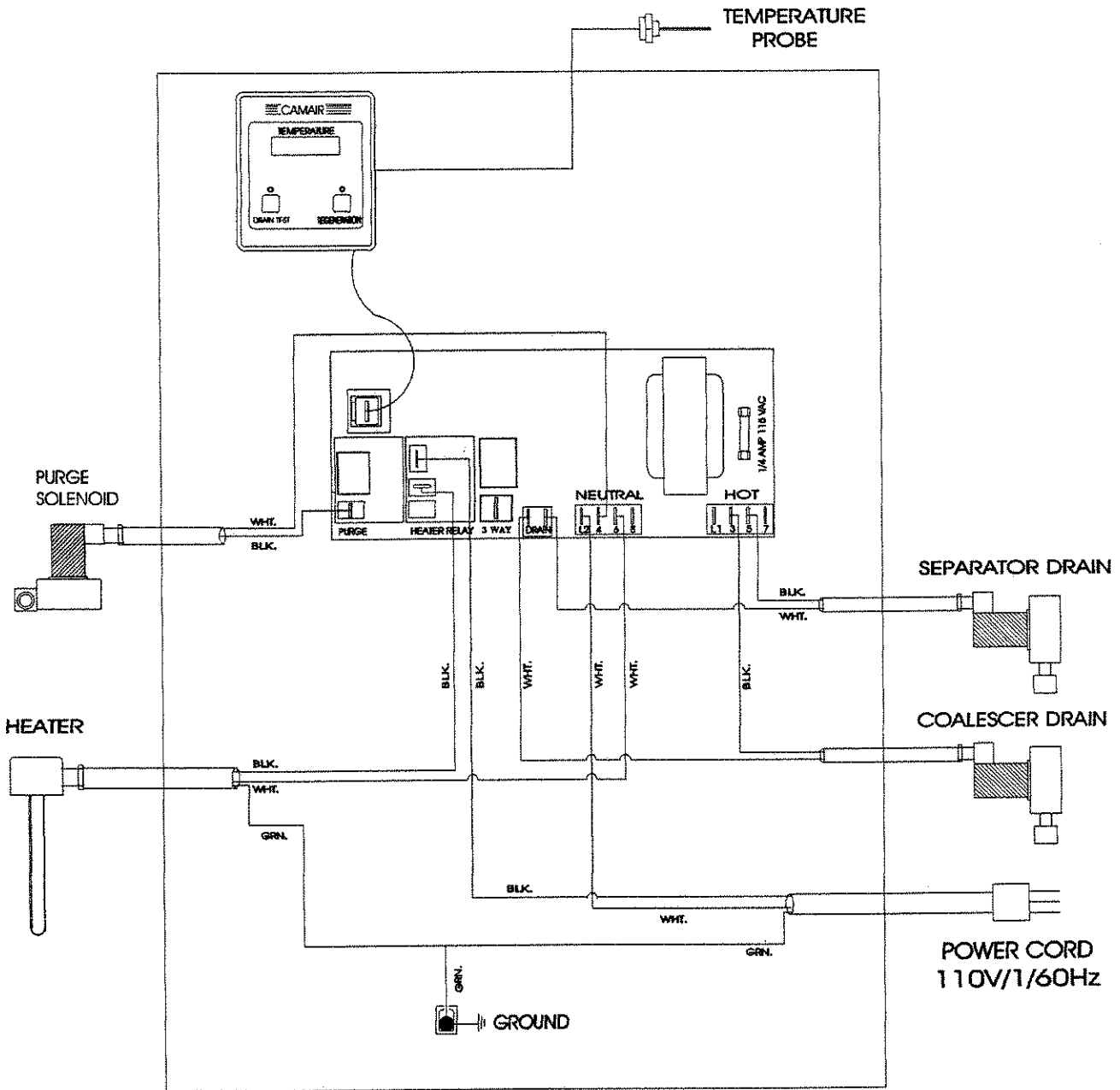


TO SERVICE THE DRAIN VALVES

- 1.) LOOSEN THE SCREW HOLDING THE PLUG ON THE COIL AND REMOVE IT.
- 2.) REMOVE THE TOP NUT AND TAKE THE COIL OFF.
- 3.) REMOVE THE STANDARD SLEEVE, BEING CAREFUL NOT TO LOOSEN THE O-RING OR THE PLUNGER AND SPRING.
- 4.) REMOVE THE DIAPHRAGM, CLEAN IT WITH A SOFT CLOTH.
- 5.) REASSEMBLE AND PUT BACK IN SERVICE.



WIRING DIAGRAM XL50-AD AIR DRYER



CAMAIR PRODUCTS WARRANTY

The warranty on CAMAIR desiccant compressed air dryers is the warranty of the manufacturer, CAMAIR Inc. , Buffalo NY.

CAMAIR Inc. warrants the desiccant compressed air dryers manufactured by it to be free of defects in materials and workmanship for a period of one (1) year from the date of purchase by the user of such equipment.

CAMAIR will replace, without charge, any part of the desiccant compressed air dryer, except those noted below, upon verification by the distributor that such part has failed.

This warranty does not cover intentional or accidental damage or damage due to improper application of the equipment.

This warranty does not cover replaceable filter elements, desiccant or moisture indicator.

CAMAIR will install such parts, without charge, if the unit is returned to the factory in Buffalo, NY, or such other location specified by CAMAIR, freight prepaid . The unit will be repaired and returned freight prepaid.

This express warranty is in lieu of all other warranties, expressed or implied, including any implied warranty of merchantability for fitness for a particular purpose. The remedies stated above are the sole and exclusive remedy for the obligations of CAMAIR, Inc. arising from the sale of its products and in no case will CAMAIR, Inc. be liable for incidental or consequential loss or damages, including without limitation, damage to other property, loss of profits, loss of good will, or other economic loss whether such incidental or consequential damage is claimed on account of breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory.